

What is claimed is:

- 1 1. A system for visually building applications, said system comprising:
2 a first module adapted to allow a developer to visually design workflow for an
3 application;
4 a second module adapted to allow a developer to design views for said application; and
5 a third module adapted to allow a developer to integrate data sources within said
6 application.
- 1 2. The system of claim 1 further comprising an interactive development environment for
2 allowing a developer to interact with said first, second and third modules to design said
3 application.
- 1 3. The system of claim 2 wherein said interactive development environment comprises a
2 graphical user interface for allowing a developer to visually interact with said first, second and
3 third module.
- 1 4. The system of claim 1 wherein said system is adapted to allow a developer to design
2 multi-modal applications.
- 1 5. The system of claim 1 wherein said system is adapted to allow a developer to design
2 multi-channel applications.
- 1 6. The system of claim 5 wherein said system is adapted to allow a developer to design
2 multi-channel applications including at least one channel selected from the group comprising
3 voice channels, web channels, and wireless web channels.
- 1 7. A system for visually building multi-channel applications, comprising:
2 an interactive development environment for visually designing workflow for a multi-
3 channel application, said environment being adapted to allow a developer to independently
4 design said workflow in a plurality of layers, each of said layers corresponding to at least one
5 channel of said application.

1 8. The system of claim 7 wherein said interactive development environment provides a
2 graphical interface for independently displaying and designing said plurality of layers.

1 9. The system of claim 8 wherein said interface is adapted to independently display a root
2 layer including states common to each of said channels of said application, and to allow a
3 developer to visually design said root layer.

1 10. The system of claim 9 wherein said graphical interface is further adapted to
2 independently display a voice layer including states common to a voice channel of said
3 application, and to allow a developer to visually design said voice layer.

1 11. The system of claim 10 wherein said graphical interface is further adapted to
2 independently display a visual layer including states common to a visual channel of said
3 application, and to allow a developer to visually design said visual layer.

1 12. The system of claim 11 wherein said graphical interface is further adapted to display
2 combinations of said root, voice and visual layers.

1 13. A system for visually building applications, comprising:
2 a graphical user interface adapted to allow a user to visually build a workflow for an
3 application; and
4 a module for converting said visually built workflow into a markup language.

1 14. The system of claim 13 wherein said markup language comprises an XML-based
2 language.

1 15. The system of claim 14 wherein said graphical user interface is adapted to allow a user to
2 visually build a single workflow for an application capable of operating over a plurality of
3 channels.

1 16. The system of claim 13 wherein said graphical user interface is adapted to allow a user to
2 visually build a single workflow for an application capable of operating in a plurality of modes.

- 1 17. The system of claim 13 further comprising:
2 a second graphical user interface adapted to allow a developer to build views of an
3 application; and
4 a second module adapted to convert said built views into a markup language.
- 1 18. The system of claim 17 wherein said markup language comprises an XML-based
2 language.
- 1 19. A method of building an application, comprising the steps of:
2 providing a visual development environment;
3 designing an application workflow within said visual development environment, said
4 application workflow describing certain business logic and comprising a plurality of states and a
5 plurality of transitions, linking said states; and
6 converting said application workflow into an application descriptor.
- 1 20. The method of claim 19 further comprising the step of:
2 designing a presentation of said application within said visual development environment.
- 1 21. The method of claim 20 further comprising the step of:
2 internationalizing said presentation of said application within said visual development
3 environment.
- 4 22. The method of claim 21 further comprising the step of:
5 integrating data sources into said application by use of said visual development
6 environment.
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2 23. The method of claim 19 wherein said application workflow describes a multi-channel
3 application.
- 1 24. The method of claim 20 wherein said application workflow is designed in a plurality of
2 layers, each layer including states and transitions common to at least one channel of said
3 application.

1 26. The method of claim 21 further comprising the step of:
2 packaging said application workflow into a reusable component within said visual
3 development environment.